## AMENDMENTS TO THE CLAIMS

Please amend the claims as follows. This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims**:

Claim 1 (currently amended): An aspiration catheter, comprising:

an elongate catheter body having proximal and distal ends;

an aspiration lumen extending longitudinally through the elongate catheter body between the catheter body proximal end and an aspiration port at the catheter body distal end, the aspiration port being sized for aspirating particles from a blood vessel;

a guidewire lumen being adapted for slidably receiving a guidewire and extending longitudinally through at least a portion of the elongate catheter body adjacent the aspiration lumen, from a proximal port to a distal port opening to the exterior of the elongate catheter body, the guidewire lumen having an inner cross-sectional area that is significantly smaller than the inner cross-sectional area of the aspiration lumen; and

wherein the elongate catheter body includes a distal segment wherein the aspiration lumen extends distally beyond the distal port of the guidewire lumen, the aspiration lumen within the distal segment being configured to convey embolic material proximally from the blood vessel upon exposure to a source of negative pressure.

Claim 2 (original): The aspiration catheter of Claim 1, wherein the distal segment of the aspiration lumen extends beyond the distal end of the guidewire lumen by about 2 mm to about 30 mm.

Claim 3 (original): The aspiration catheter of Claim 1, wherein the aspiration port is formed with an angled tip.

Claim 4 (original): The aspiration catheter of Claim 1, further comprising a plurality of side ports extending through the a side wall of the elongate catheter body along the distal segment, the side ports adapted for aspirating from a blood vessel.

Claim 5 (original): The aspiration catheter of Claim 1, wherein the guidewire lumen is located only along a distal end portion of the elongate catheter body.

Claim 6 (original): The aspiration catheter of Claim 5, wherein the guidewire lumen is about 30 cm or less in length.

Claim 7 (original): The aspiration catheter of Claim 5, wherein the guidewire lumen is about 6 cm or less in length.

Claim 8 (canceled)

Claim 9 (original): The aspiration catheter of Claim 1, wherein the elongate catheter body further comprises an irrigation lumen.

Claim 10 (previously amended): The aspiration catheter of Claim 1, further comprising a therapy device mounted on a distal end portion of the elongate catheter body.

Claims 11- 42 (canceled)

Claim 43 (previously presented): The aspiration catheter of Claim 1, wherein the aspiration lumen has an inner diameter ranging from about .03 inches to about .07 inches.

Claim 44 (previously presented): The aspiration catheter of Claim 1, wherein a radiopaque marker is attached to the distal segment of the elongate catheter body.

Claim 45 (currently amended): An aspiration catheter configured to aspirate embolic material from an embolic protection filter disposed on a guidewire, the filter having a proximal end and a porous member distal of the proximal end thereof, the aspiration catheter comprising:

an elongate catheter body having a proximal end and a distal segment;

an aspiration lumen extending proximally from a distal aspiration port through the distal segment toward the proximal end of the elongate catheter body, the distal aspiration port being sized for aspirating particles from a blood vessel;

a guidewire lumen advanceable over the guidewire toward the filter, the guidewire lumen extending proximally through the elongate catheter body from a distal port to a

proximal port, the guidewire lumen having an inner cross-sectional area that is significantly smaller than the inner cross-sectional area of the aspiration lumen; and

wherein the distal segment is configured to extend distally beyond the distal port of the guidewire lumen such that the distal aspiration port can be positioned between the proximal end of the filter and the porous member, the aspiration lumen being configured to convey embolic material proximally upon exposure to a source of negative pressure.

Claim 46 (previously presented): The aspiration catheter of Claim 45, wherein the distal aspiration port is formed with an angled tip.

Claim 47 (previously presented): The aspiration catheter of Claim 45, wherein the guidewire lumen is located only along a distal end portion of the elongate catheter body.

Claim 48 (previously presented): The aspiration catheter of Claim 45, wherein the elongate catheter body further comprises an irrigation lumen.

Claim 49 (previously presented): The aspiration catheter of Claim 45, further comprising a therapy device mounted on a distal end portion of the elongate catheter body.

Claim 50 (previously presented): The aspiration catheter of Claim 45, wherein a radiopaque marker is mounted on the distal segment and assists in the positioning of the distal aspiration port between the proximal end of the filter and the porous member.

Claim 51 (currently amended): An aspiration catheter system for aspirating embolic material from a filter positioned within a blood vessel, comprising:

an elongate catheter body having proximal segment and a distal segment;

an aspiration lumen extending longitudinally through the elongate catheter body between the catheter body proximal segment and an aspiration port at a distal end of the catheter body distal segment, the aspiration port being sized for aspirating particles from a blood vessel; [[and]]

a guidewire lumen being adapted for slidably receiving a guidewire, the guidewire lumen and extending longitudinally through the elongate catheter body adjacent the aspiration lumen, from a proximal port to a distal port, the guidewire lumen further

having an inner cross-sectional area that is significantly smaller than the inner cross-sectional area of the aspiration lumen; and

a source of negative pressure in fluid communication with the aspiration lumen to facilitate aspiration of emboli from the blood vessel;

wherein the aspiration lumen is not in fluid communication with the guidewire lumen.

Claim 52 (previously presented): The aspiration catheter system of Claim 51, wherein the source of negative pressure is a syringe.

Claim 53 (previously presented): The aspiration catheter system of Claim 51, wherein the aspiration lumen has an inner cross-sectional area that is substantially greater than the inner cross-sectional area of the guidewire lumen.

Claim 54 (previously presented): The aspiration catheter of Claim 51, wherein the guidewire lumen is located only along a distal portion of the elongate catheter body.

Claim 55 (previously presented): The aspiration catheter system of Claim 51, wherein the aspiration port is formed with an angled tip.

Claim 56 (previously presented): The aspiration catheter system of Claim 51, wherein the elongate catheter body further comprises an irrigation lumen.

Claim 57 (previously presented): The aspiration catheter system of Claim 51, further comprising a therapy device mounted on a distal end portion of the elongate catheter body.